

REMARKS/ARGUMENTS

Claims 1-42 are pending in the application. Claims 31-42 were withdrawn based on an election to a restriction requirement made on September 28, 2007. Claims 1-30 stand rejected. Claims 1, 6, 12, and 22 are amended herein. Support for amended claims can be found, for example, at page 3, lines 8-25 and page 7, lines 12-13 of the application as well as throughout the examples and the claims as originally filed. Claims 2, 8-11, 15-18, and 25-27 are cancelled herein without prejudice or disclaimer. Thus, no new matter is added.

35 U.S.C. § 102(b)

Claims 1-4, 7-8, 10, 12-15, 17, 20, 22-25, 27, 29 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Young, *et al.*, *J of Biological Chemistry* (1997) 272(18):12116-12121. Specifically, the Examiner alleges that Young, *et al.* teach a test inhibitor, SB203580, and a p38 kinase incubated with FSBA and ATP to determine the kinase inhibitory activity of SB203580. The Examiner goes on to assert that the FSBA is an ATP analogue that covalently modifies the kinase at lysine 72 and precludes ATP binding.

A single prior art reference anticipates a claimed invention only if it identically shows every element of the claimed invention. *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). The Applicants amend claims 1, 12, and 22 herein to recite that enzyme inhibition is detected using a method selected from the group of: Western blot and mass spectrometry. The Applicants respectfully submit that Young, *et al.* disclose detecting kinase activity using a radiolabel kinase assay in which ATP is radiolabelled as described at page 12117. However, Young, *et al.* do not disclose detecting the test compound's inhibition of a kinase using a Western blot or mass spectroscopy. Furthermore, Young, *et al.* do not disclose using biotinylated FSBA for detecting kinase activity or inhibition. Thus, the Young, *et al.* do not disclose each and every element of the claims as amended.

The Applicants respectfully submit that, in view of the forgoing remarks and the claims as amended, the Applicants have overcome the rejection of claims 1, 3-4, 7, 12-14, 20, 22-24, and 29 under 35 U.S.C. § 102(b). Claims 2, 8-11, 15-18, and 25-27 are cancelled herein, thus,

rendering rejection of these claims moot. Accordingly, the Applicants respectfully request withdrawal of these rejections.

35 U.S.C. § 112, first paragraph

Claims 1-4, 6-20, and 22-29 stand rejected under 35 U.S.C. § 112, first paragraph. The Examiner concedes that the specification is enabled for a kinase and biotinylated FSBA; however, he alleges that it is not enabled for “an enzyme” or “an analyte.” The Applicants respectfully disagree that the specification is not enabling for both enzymes and analytes. However, in an effort to advance prosecution the Applicants amend claims 1 and 6 herein to recite “kinase” rather than “enzyme.” However, the Applicants do not amend the term “analyte.”

The Applicants respectfully submit that under the guidance provided by *In re Wands*, as cited by the Examiner, some experimentation may be necessary to practice a claimed invention. The test of enablement is not whether any experimentation is necessary, but whether it is undue. *In re Angstadt*, 537 F.2d 498, 504 (CCPA 1976). The Applicants respectfully submit that they show throughout the specification that an analyte that binds to the ATP site of a kinase can be used to detect a compound’s interaction with or inhibition of a kinase using methods such as mass spectroscopy and Western blot. In the examples provided in the specification, the Applicants use FSBA or biotinylated FSBA as an example analyte of various kinases having an ATP binding site. However, the Applicants respectfully submit that the numerous examples provided in the application enable general, rapid and reproducible means to screen inhibitors of protein kinase using the methods of mass spectroscopy and Western blot. The Applicants further submit that the skilled person would understand through the teaching of the present invention how to apply the methods described for detecting any compound’s interaction with any kinase having an ATP binding site regardless of the comparative analyte capable of binding to the kinase’s ATP binding site. Thus, the Applicants submit that they enable methods employing any analyte capable of binding to a kinase.

The Applicants respectfully submit that, in view of the forgoing remarks and the claims as amended, the Applicants have overcome the rejection of claims 1, 3-4, 6-7, 12-14, 19-20, 22-24, and 28-29 under 35 U.S.C. § 112, first paragraph. Claims 2, 8-11, 15-18, and 25-27 are

cancelled herein, thus, rendering rejection of these claims moot. Accordingly, the Applicants respectfully request withdrawal of these rejections.

35 U.S.C. § 112, second paragraph

Claims 1-30 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. In particular, the Examiner alleges the phrase “capable of binding” may be more positively stated as “which binds.” The Applicants respectfully disagree. If the test compound is an inhibitor of the kinase the analyte may not bind or may have diminished binding with the kinase in the presence of test compound. Therefore, the analyte merely needs to have the capability of binding to the ATP binding site of the kinase for identifying inhibitors of the kinase. The Applicants respectfully point out the independent claims 12 and 22 do not recite the phrase “capable of binding.”

In addition, the Examiner alleges that claim 1 is incomplete because there is allegedly no step accomplishing the preamble. The Applicants respectfully disagree with this allegation. However, in an effort to advance prosecution the Applicants amend claims 1, 12, and 22 herein to recite “wherein a test compound that diminishes the binding of said analyte to said kinase is an inhibitor.” Support for these amendments can be found, for instance, at page 3, lines 8-25 of the application.

The Applicants respectfully submit that, in view of the forgoing remarks and the claims as amended, the Applicants have overcome the rejection of claims 1, 3-7, 12-14, 19-24, and 28-29 under 35 U.S.C. § 112, second paragraph. Claims 2, 8-11, 15-18, and 25-27 are cancelled herein, thus, rendering rejection of these claims moot. Accordingly, the Applicants respectfully request withdrawal of these rejections.

The Applicants reserve the right to prosecute, in one or more patent applications, the claims to non-elected inventions, the cancelled claims, the claims as originally filed, and any other claims supported by the specification. The Applicants thank the Examiner for the Office Action and believe this response to be a full and complete response to such Office Action. Accordingly, favorable reconsideration and allowance of the pending claims is earnestly

solicited. If it would expedite the prosecution of this application, the Examiner is invited to confer with the Applicants' undersigned attorney.

Respectfully submitted,

\\AndreaVLockenour\\

Andrea Lockenour
Attorney for Applicants
Registration No. 51,962

GLAXOSMITHKLINE
Corporate Intellectual Property - UW2220
P.O. Box 1539
King of Prussia, PA 19406-0939
Phone (610) 270-7568
Facsimile (610) 270-5090

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